DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randall D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

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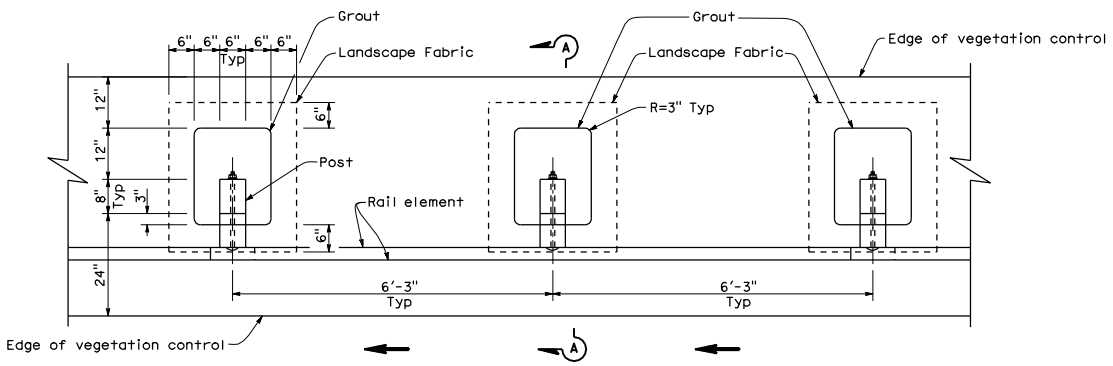
REGISTERED PROFESSIONAL ENGINEER
Randall D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

To accompany plans dated _____



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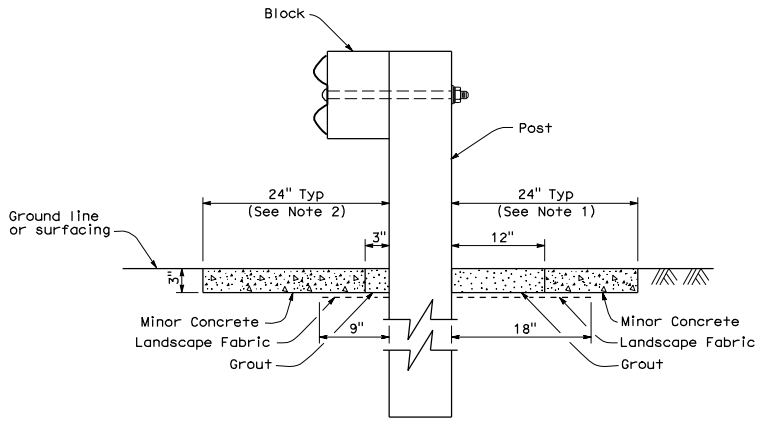

SECTION A-A

NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ⟵.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION

NO SCALE

NSP A77C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C5

7-17-06

2006 NEW STANDARD PLAN NSP A77C5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

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REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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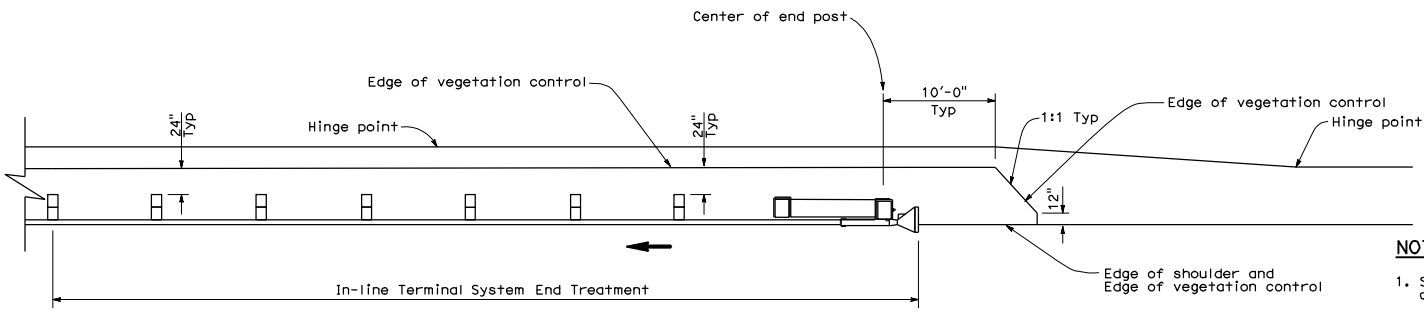

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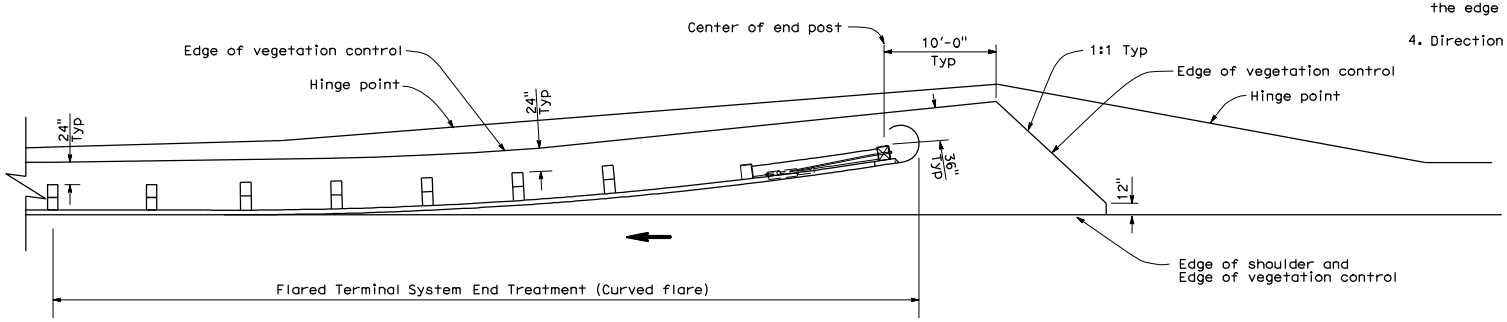

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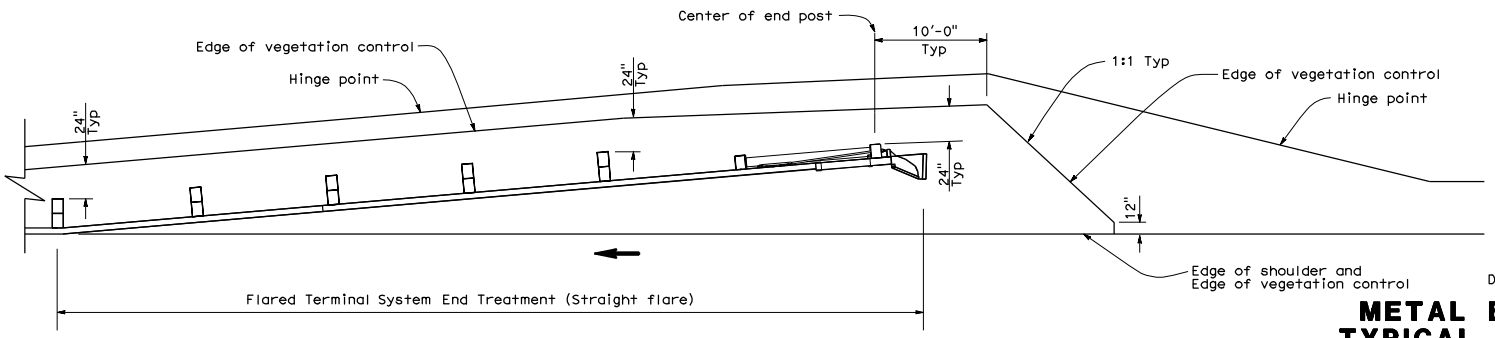

PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
FOR TERMINAL SYSTEM END TREATMENTS

NO SCALE

NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C6

7-17-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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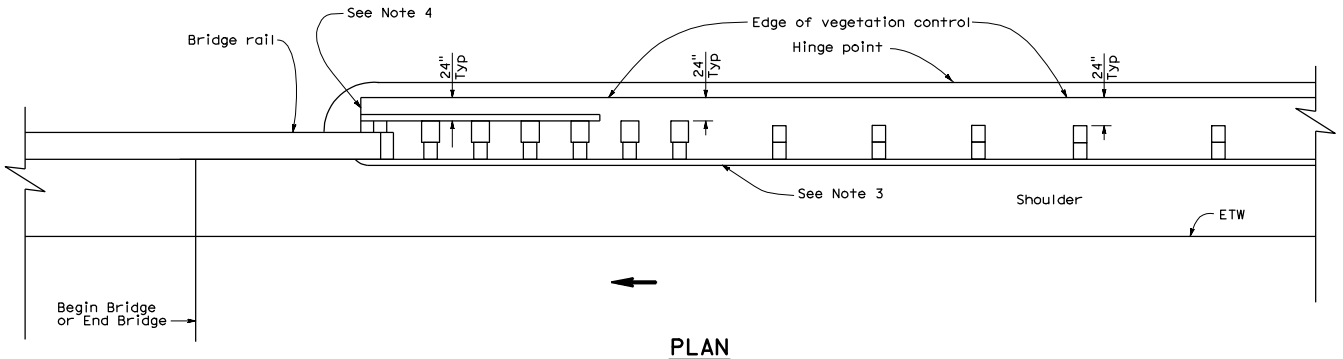

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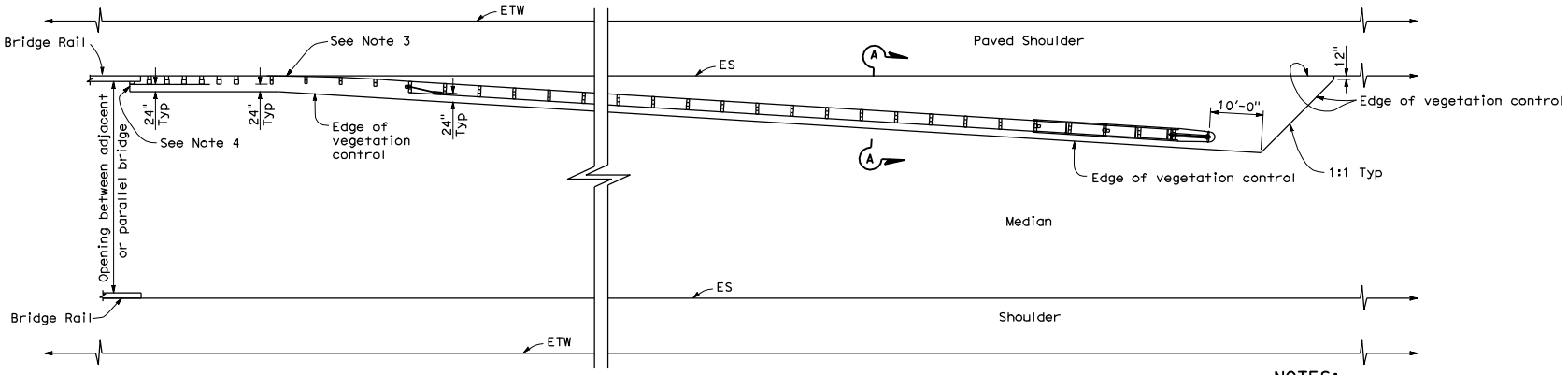

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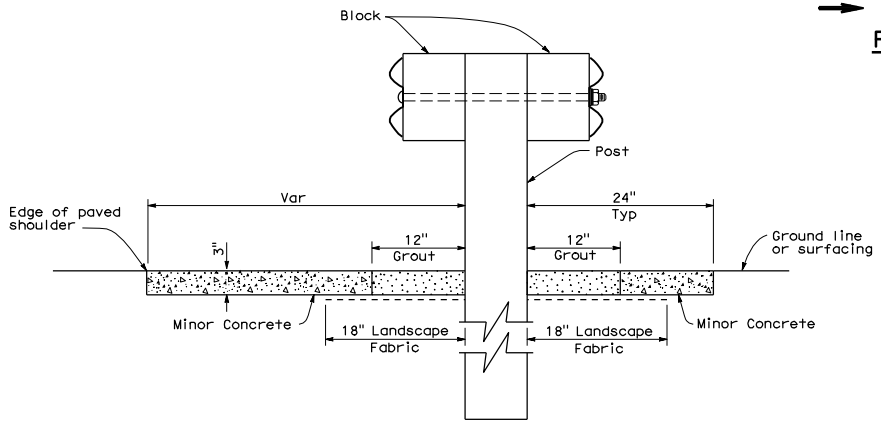

SECTION A-A

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. End vegetation control at end of backside rail element.
5. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL VEGETATION CONTROL AT STRUCTURE APPROACH AND DEPARTURE

NO SCALE

NSP A77C7 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C7

7-17-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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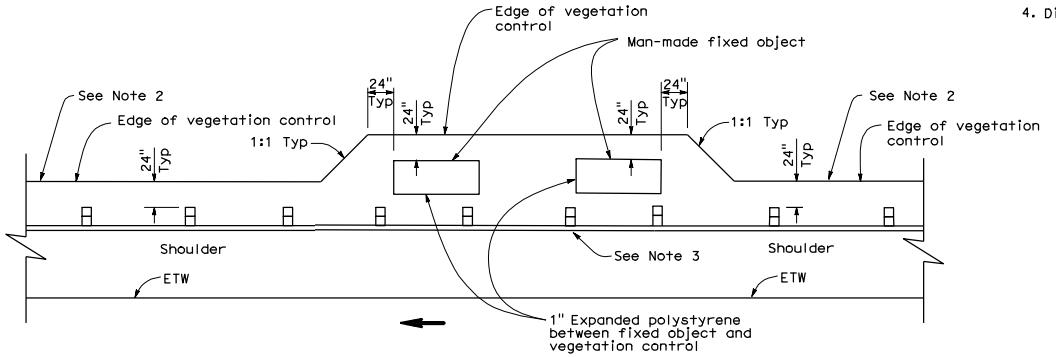

PLAN

FIXED OBJECT(S) ON SHOULDER

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL AT FIXED OBJECT

NO SCALE

NSP A77C8 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C8

7-17-06

2006 NEW STANDARD PLAN NSP A77C8

47D

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ⟵.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randall D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

Registered Professional Engineer — Randall D. Hiatt — No. C50200 — Exp. 6-30-07 — CIVIL — State of California

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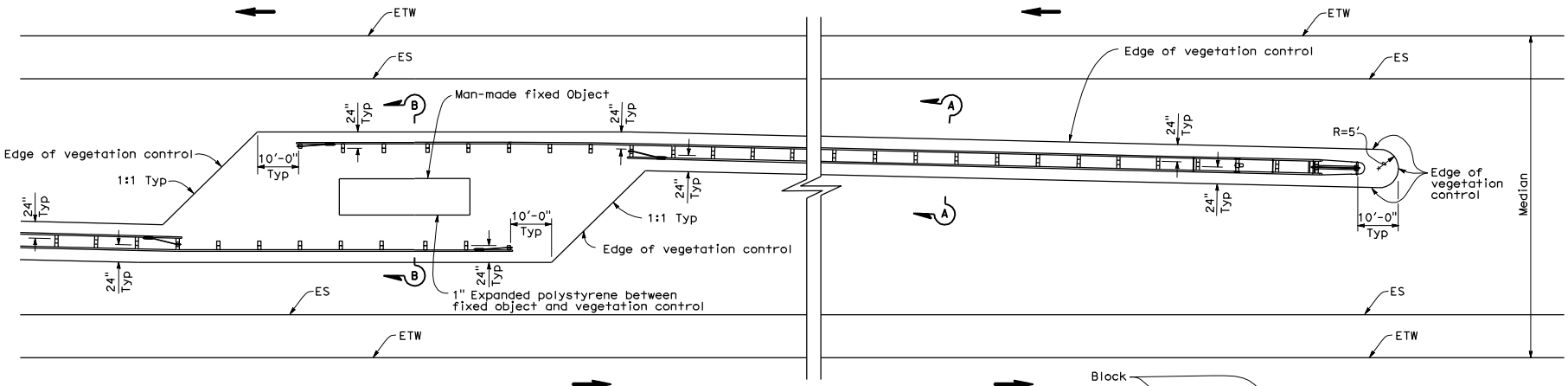
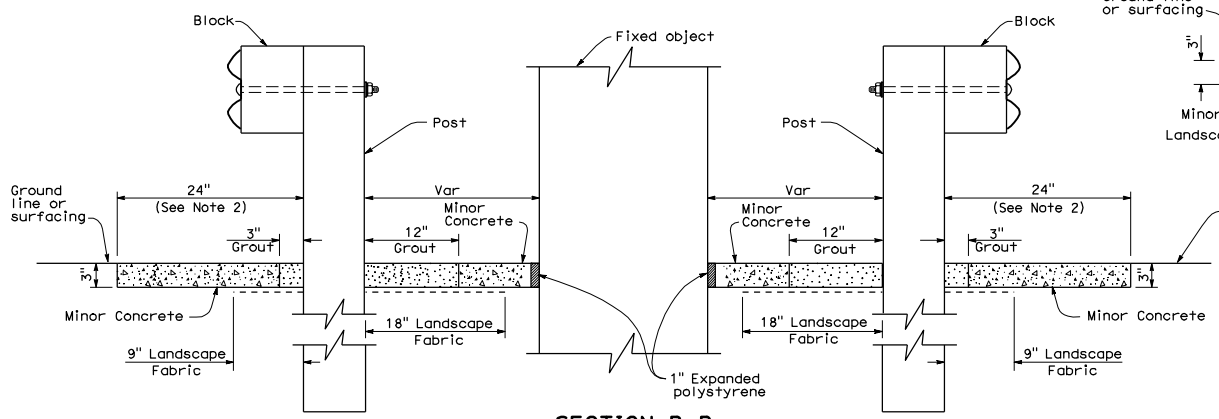
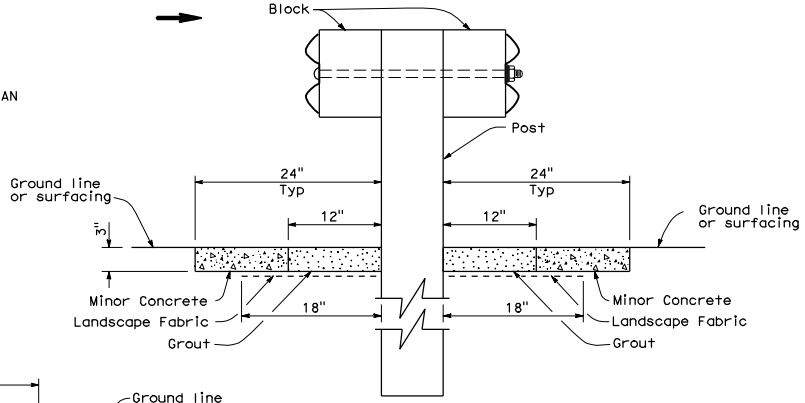


PLAN

FIXED OBJECT(S) IN MEDIAN



SECTION B-B



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL VEGETATION CONTROL AT FIXED OBJECT

NO SCALE

NSP A77C9 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C9

7-17-06

47E

2006 NEW STANDARD PLAN NSP A77C9

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ⟵.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

Registered Professional Engineer — Randell D. Hiatt — No. C50200 — Exp. 6-30-07 — CIVIL — State of California

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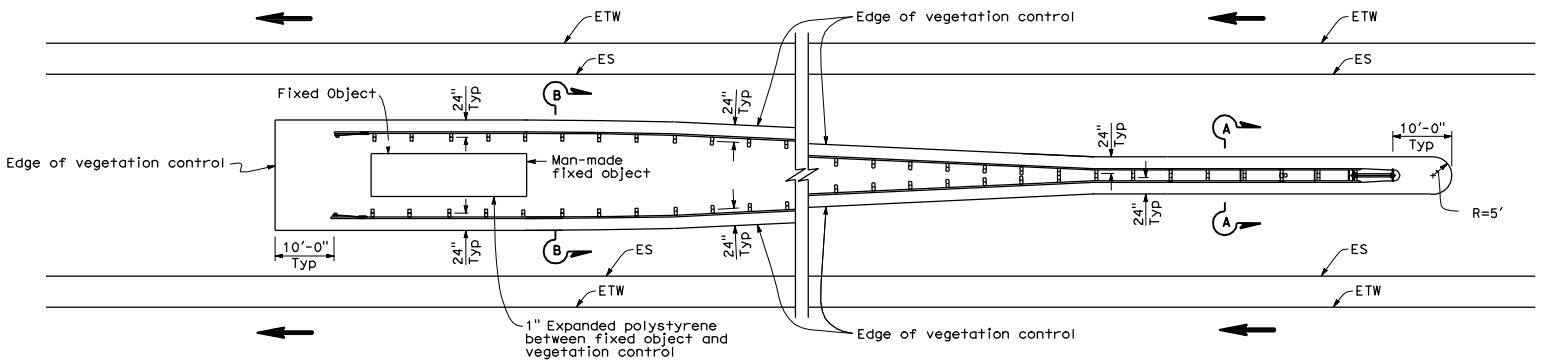
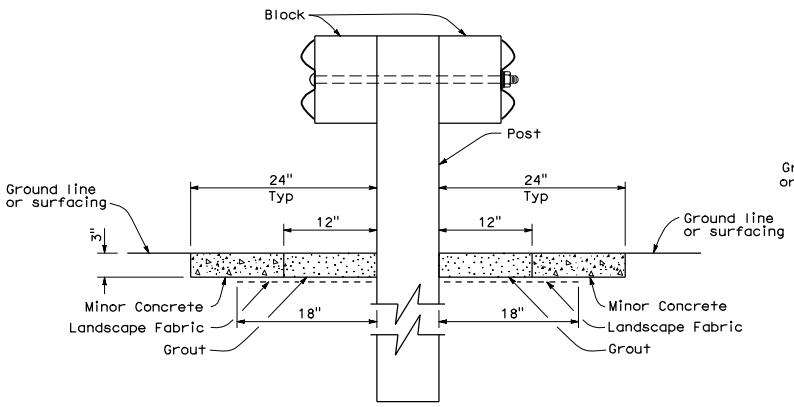
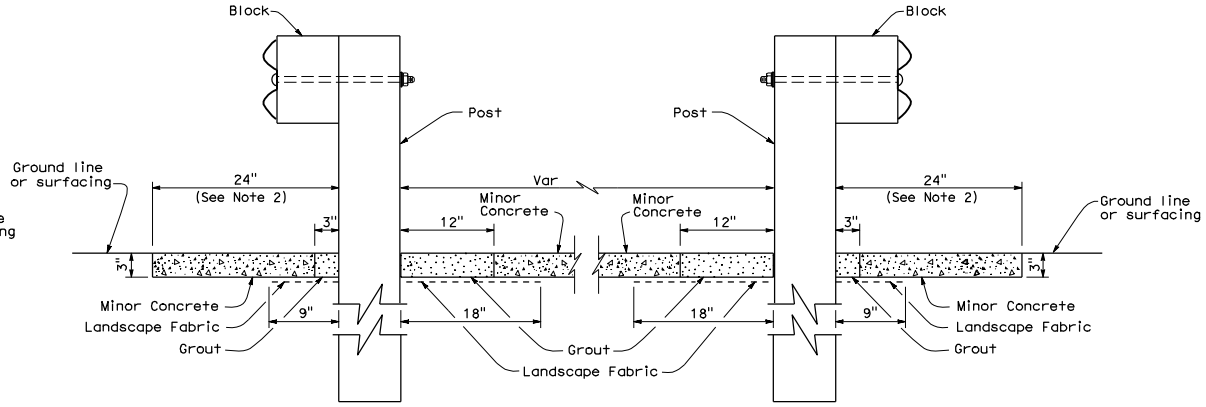


PLAN

FIXED OBJECT(S) BETWEEN SEPARATE ROADBEDS (ONE-WAY TRAFFIC)



SECTION A-A



SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL VEGETATION CONTROL AT FIXED OBJECT

NO SCALE

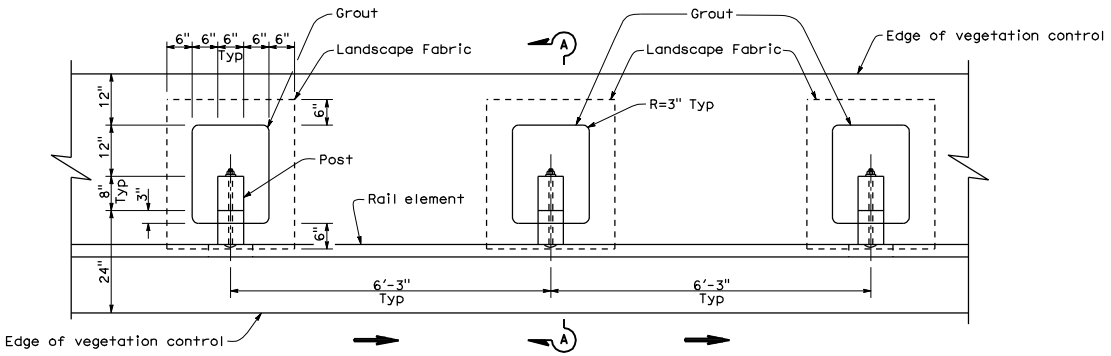
NSP A77C10 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C10

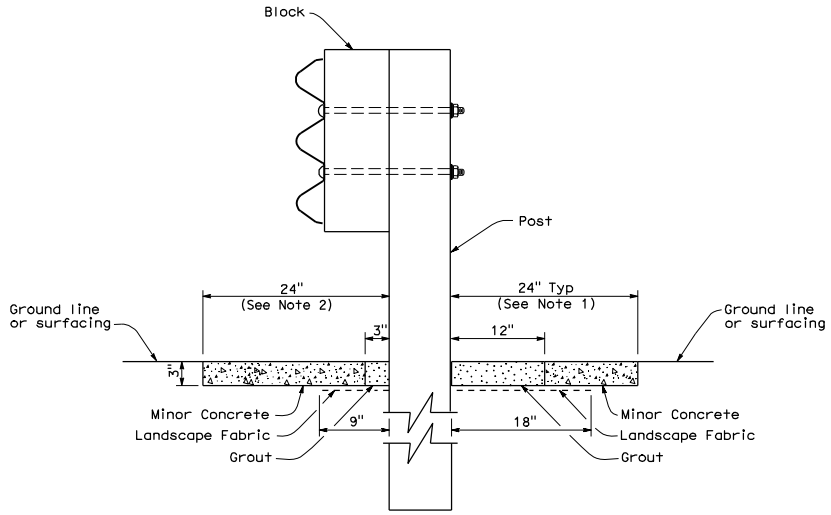
7-17-06

47F

2006 NEW STANDARD PLAN NSP A77C10



PLAN



SECTION A-A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

Registered Professional Engineer
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
State of California

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NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under barrier, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ➔.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SINGLE THRIE BEAM BARRIER
TYPICAL VEGETATION CONTROL
STANDARD BARRIER RAILING SECTION

NO SCALE

NSP A78C3 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A78C3

7-17-06

2006 NEW STANDARD PLAN NSP A78C3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
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CIVIL
STATE OF CALIFORNIA

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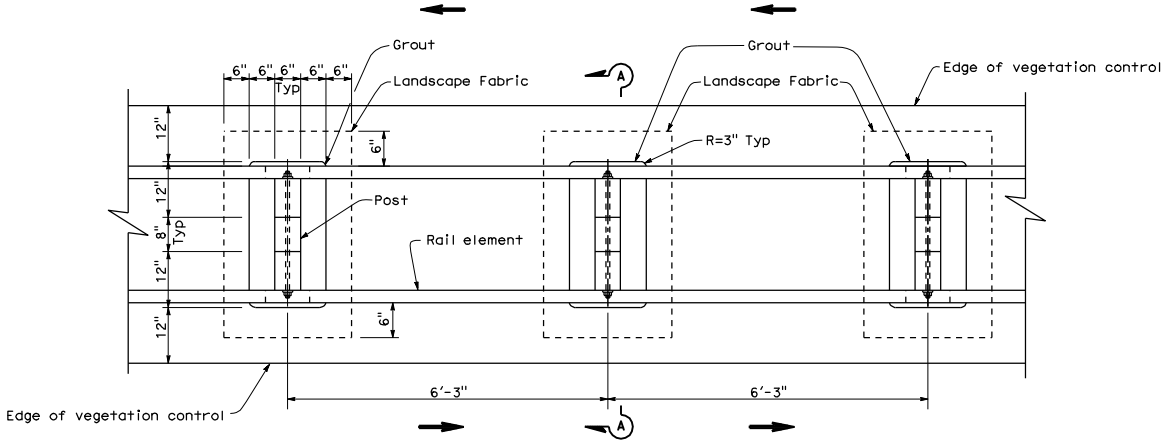
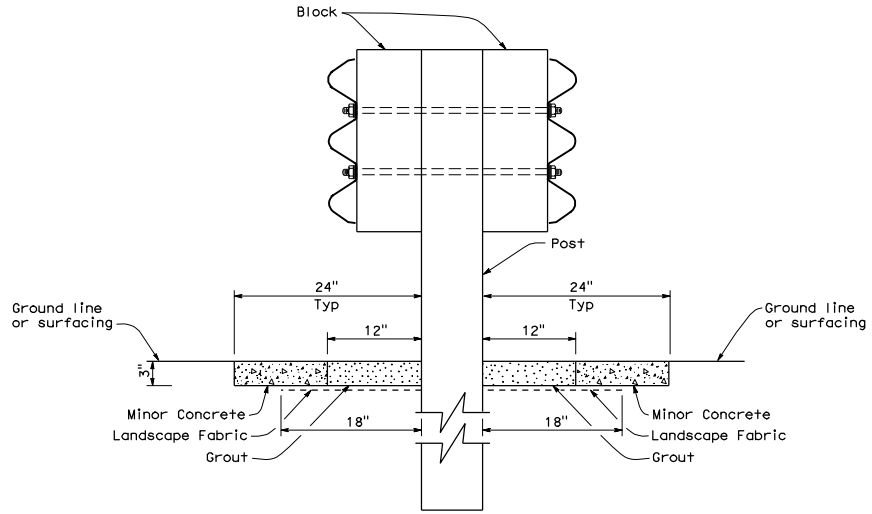


PLAN



SECTION A-A

NOTE:

1. Direction of adjacent traffic indicated by ➡.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DOUBLE THRIE BEAM BARRIER
TYPICAL VEGETATION CONTROL
STANDARD BARRIER RAILING SECTION

NO SCALE

NSP A78C4 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A78C4

7-17-06

2006 NEW STANDARD PLAN NSP A78C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
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CIVIL
STATE OF CALIFORNIA

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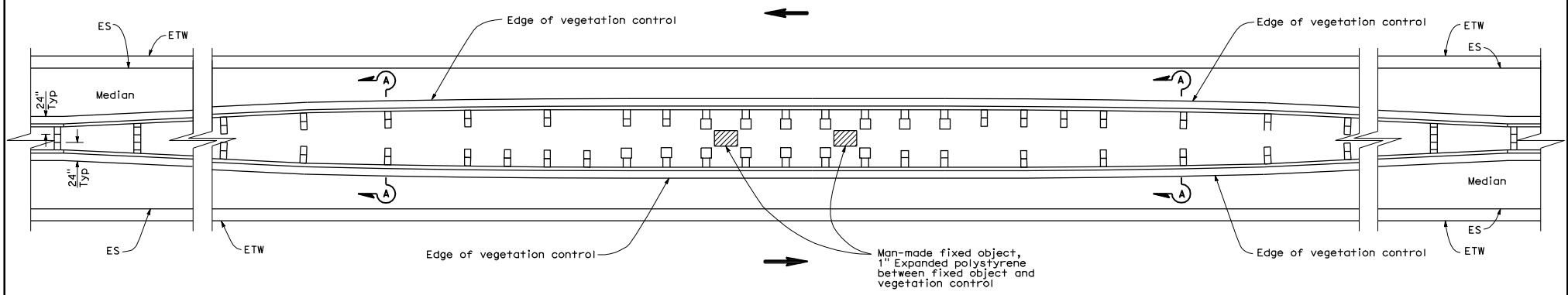

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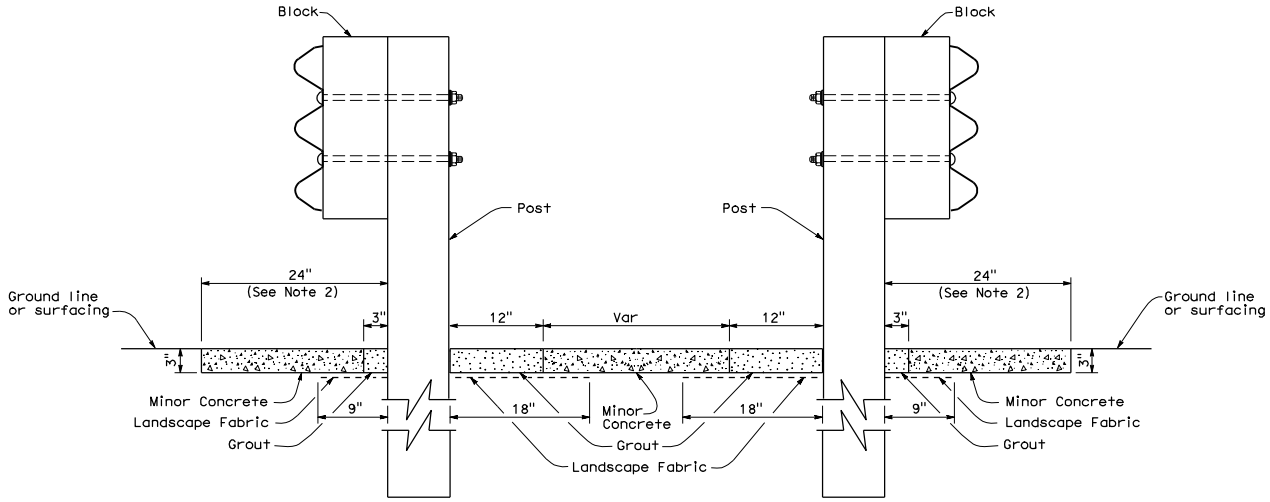

SECTION A-A

NOTES:

1. See New Standard Plan NSP A78C3 for additional vegetation control.
2. Where dike is constructed under barrier, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

THRIE BEAM BARRIER TYPICAL VEGETATION CONTROL AT FIXED OBJECTS IN MEDIAN

NO SCALE

NSP A78C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A78C5

7-17-06

2006 NEW STANDARD PLAN NSP A78C5

868

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
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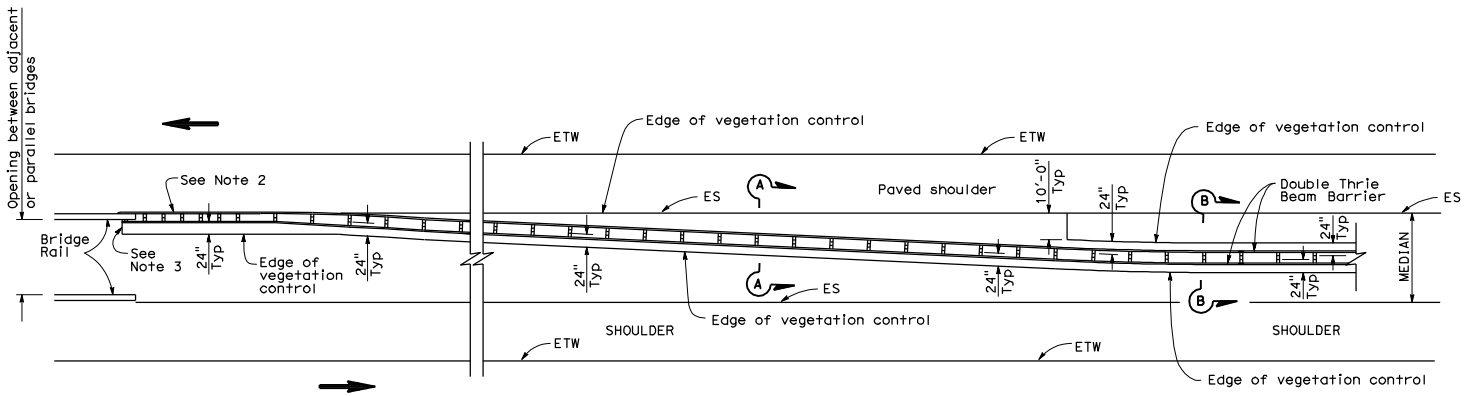
CIVIL
STATE OF CALIFORNIA

To accompany plans dated _____



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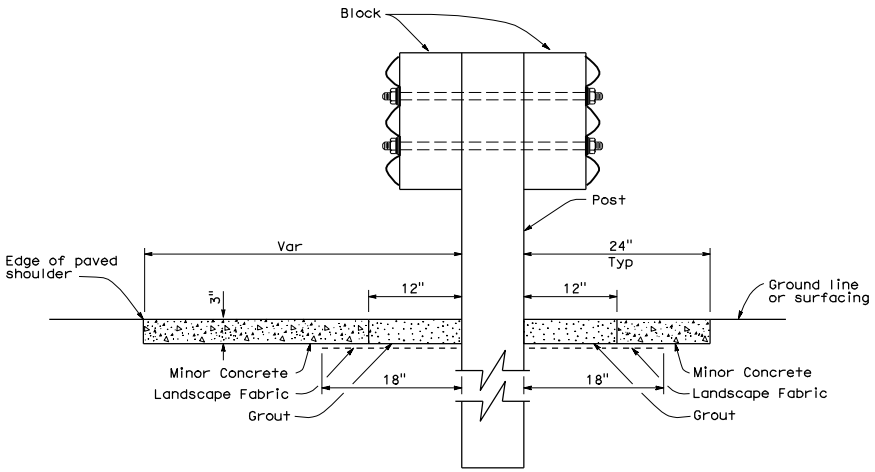
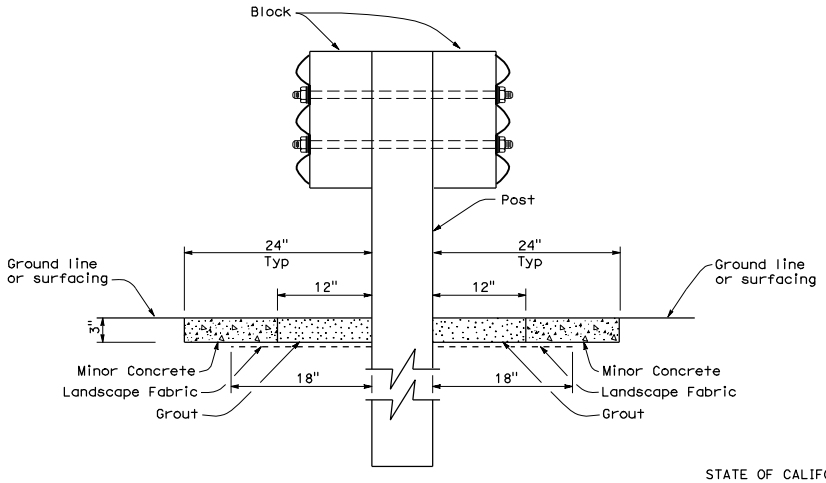


SECTION A-A



SECTION B-B

NOTES:

1. See New Standard Plan NSP A78C4 for additional vegetation control details.
2. Where dike is constructed under barrier, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. End vegetation control at end of backside rail element attached to bridge railing.
4. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

THRIE BEAM BARRIER TYPICAL VEGETATION CONTROL AT STRUCTURE APPROACH

NO SCALE

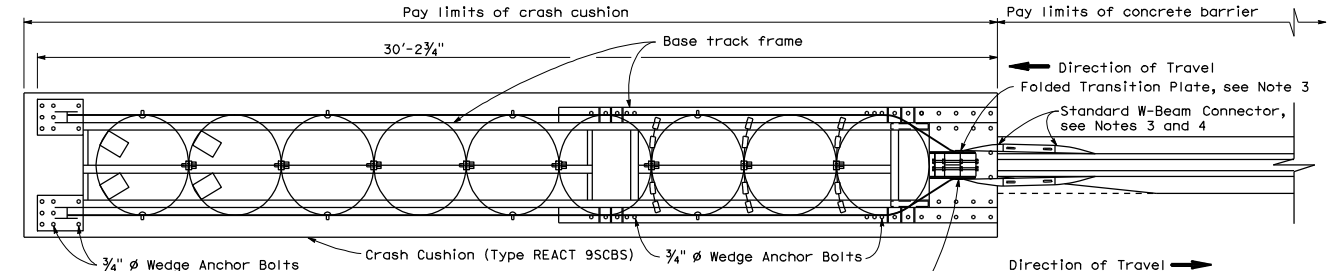
NSP A78C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A78C6

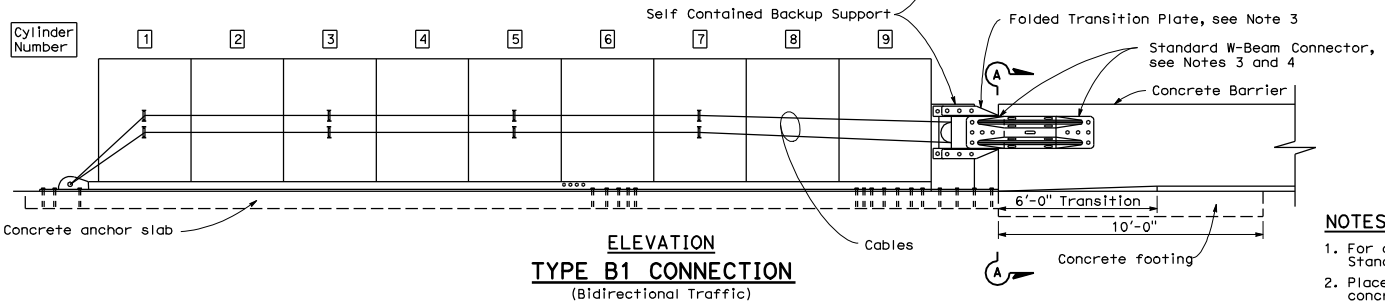
7-17-06

2006 NEW STANDARD PLAN NSP A78C6

86D



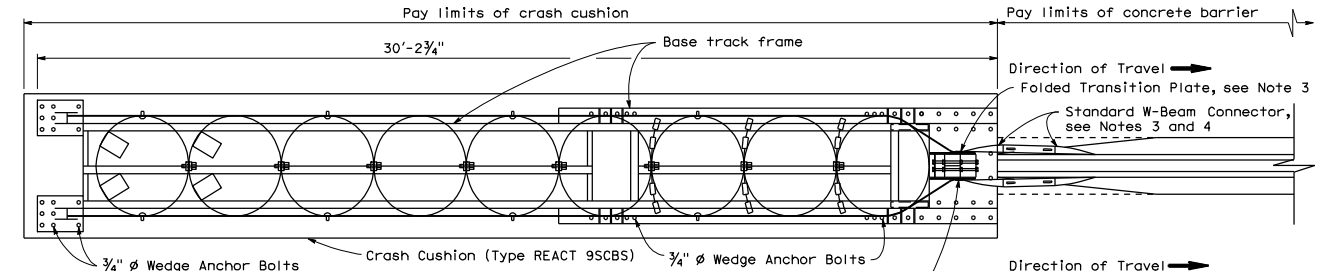
PLAN VIEW



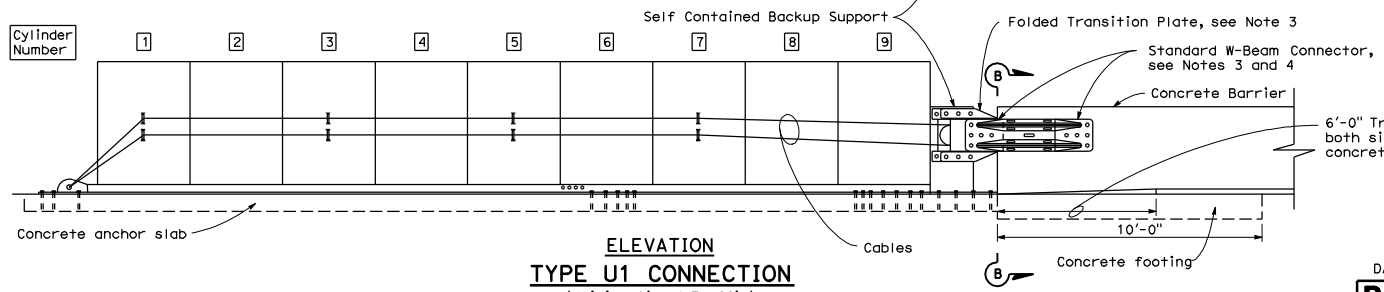
ELEVATION

TYPE B1 CONNECTION

(Bidirectional Traffic)



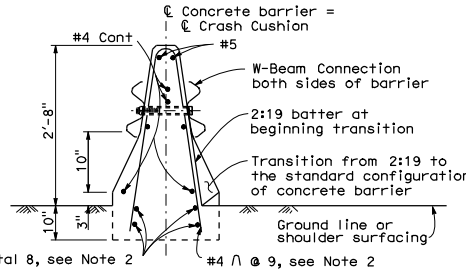
PLAN VIEW



ELEVATION

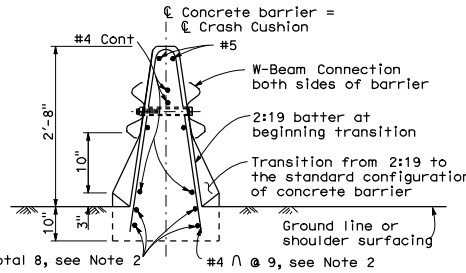
TYPE U1 CONNECTION

(Unidirectional Traffic)



SECTION A-A

(Type 50 Barrier shown)



SECTION B-B

(Type 50 Barrier shown)

NOTES:

1. For additional details of Crash Cushion (Type REACT 9SCBS), see Standard Plan A82D1.
2. Place this reinforcement for the full 10'-0" length of the terminus of the concrete barrier.
3. Attach manufacturer supplied folded transition plates and W-Beam connectors to backup support with manufacturer supplied bolts.
4. Attach W-Beam Connectors to barrier with manufacturer supplied anchor bolts in the manner recommended by the manufacturer.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CRASH CUSHION (TYPE REACT 9SCBS) CONNECTION TO CONCRETE BARRIER

NO SCALE

RSP A82D2 DATED OCTOBER 20, 2006 SUPERSEDES STANDARD PLAN A82D2 DATED MAY 1, 2006 - PAGE 108 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A82D2

9-13-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Daniel T. Adams
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Daniel T. Adams — No. C46476 — Exp. 06-30-07 — CIVIL — STATE OF CALIFORNIA

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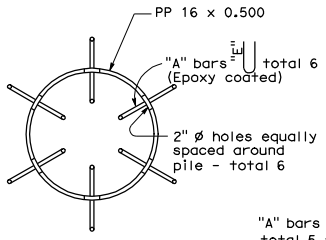
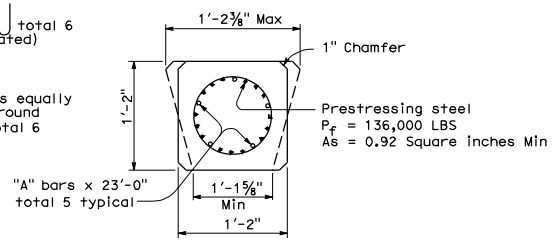
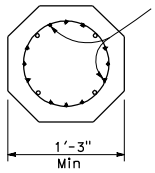
To accompany plans dated _____



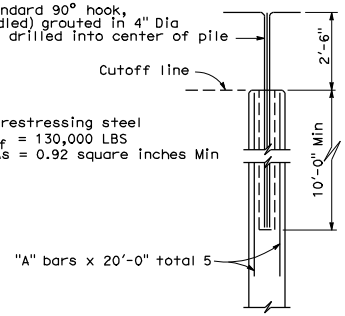
SECTION W-W
PP = Steel pipe pile



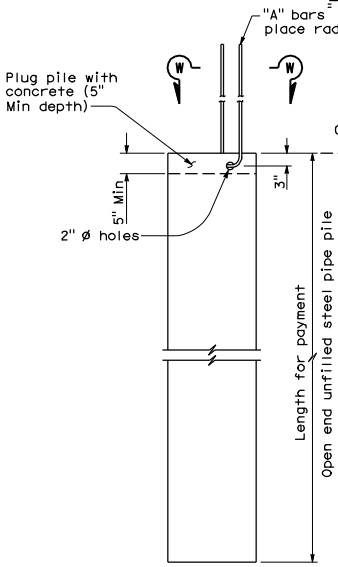
SECTION X-X



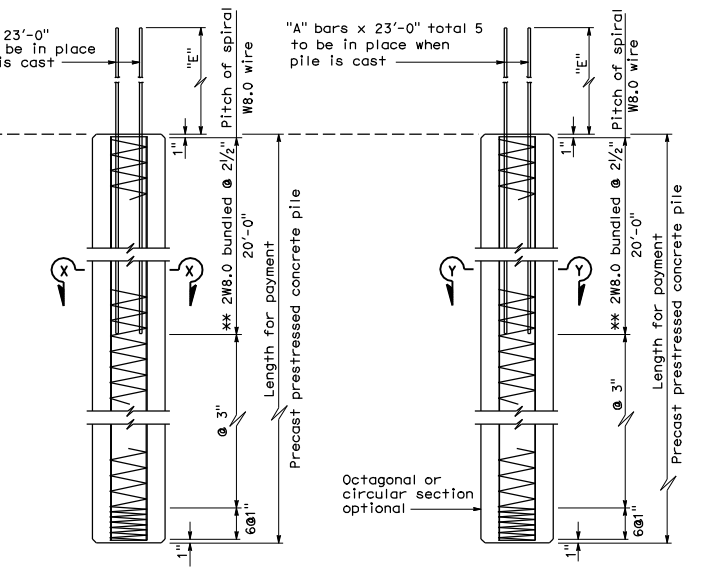
SECTION Y-Y



ALTERNATIVE PILE ANCHOR FOR PRESTRESSED PILE



ALTERNATIVE "W"



** W11.0 @ 1¾" may be substituted

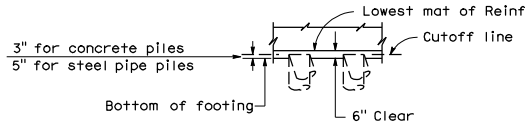
ALTERNATIVE "X"

** W11.0 @ 1¾" may be substituted

ALTERNATIVE "Y"

	Nomimal Resistance (Tension) *	
	Not Required	Required
"A" bars	#6	#8
"E" Dimension	2'-0"	2'-10"

* See Pile Data Table in the Project Plans for Nominal Resistance (Tension) Requirements



PILE EMBEDMENT

DESIGN NOTES:

DESIGN CAPACITY :
Compression = 200 kip (Service state)
= 400 kip (Nominal axial strength)
Tension = 80 kip (Service state)
= 200 kip (Nominal axial strength)

REINFORCED CONCRETE
f'_c = 4,000 psi
f_y = 60,000 psi

PRECAST PRESTRESSED PILES
P_f = Prestress Force (After losses)
Concrete Strength f'_c @ 28 days = 7,000 psi
f'_{ci} @ transfer = 4,000 psi

STEEL PIPE PILE
Fy (minimum yield strength) = 45,000 psi
Fu (minimum tensile strength) = 66,000 psi

NOTES:

1. Pile reinforcement extending into footing shall be hooked as required to provide clearance to top of footing.
2. Lapped splices in spiral pile reinforcement shall be lapped 80 wire diameters minimum. Spiral pile reinforcement at splices and at ends shall be terminated by a 135° hook with 6" tail hooked around a longitudinal bar or strand.
3. At the Contractor's option, alternative steel pipe with at least the diameter and wall thickness shown on these plans may be used. The diameter shall not exceed 1'-6".
4. Alternative "W" piles shall not be used for corrosive environments.
5. Maximum cut-off length at the top of the Alternative "X" and Alternative "Y" piles is 10'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PILE DETAILS CLASS 200

NO SCALE

RSP B2-8 DATED OCTOBER 20, 2006 SUPERSEDES STANDARD PLAN B2-8 DATED MAY 1, 2006-PAGE 242 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B2-8

10-5-06